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2682

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/520,601

Applicant(s)

LEUNG ET AL.

Examiner

Marceau Milord

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1- 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frid et al (US Patent No 6137791) in view of Hiller et al (US Patent No 6445922 B1).

Regarding claim 1, Frid et al discloses a method of processing a registration request (figs. 3, 5, 8) in a Foreign Agent (310 of figs. 3, 5) comprising: receiving a registration request identifying a Home Agent (320 of figs. 3, 5 and 8) associated with the mobile node, the registration request further including a NAI associated with the mobile node (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66); providing a registration request; and sending the registration request to the Home Agent (320 of figs. 3, 5 and 8) associated with the mobile node (col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the steps of providing a sub-NAI in the registration request, the sub-NAI uniquely identifying a session associated with the mobile node.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 2, Frid et al discloses a method of sending a registration request (figs. 3, 5, 8), in a mobile node, comprising: composing a registration request identifying a Home Agent (320 of figs. 3, 5 and 8) associated with the mobile node, the registration request further including a NAI associated with the mobile node; and sending the registration request (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66; col. 6, lines 33-66).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the mobile node; and sending the registration request.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 3, Frid et al as modified discloses a method of sending a registration request (figs. 3, 5, 8), in a mobile node, wherein the NAI identifies a user ID submitted during PPP authentication (col. 2, line 60- col. 3, line 15; col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 4, Frid et al as modified discloses a method of sending a registration request (figs. 3, 5, 8), wherein the NAI is an identifier submitted for authentication of the mobile node (col. 6, lines 33-66; col. 8, lines 24-60).

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Regarding claim 5, Frid et al as modified discloses a method of sending a registration request (figs. 3, 5, 8), wherein the NAI is an e-mail address or a user ID submitted in an application layer authentication (col. 6, lines 33-66; col. 8, lines 24-60; col. 10, lines 14-45).

Claim 6 contains similar limitations addressed in claim 1, and therefore is rejected under a similar rationale.

Regarding claim 7, Frid et al as modified discloses a method of sending a registration request (figs. 3, 5, 8), comprising: detecting the session; wherein composing the registration request is performed in response to the detection of the session (col. 10, line 28- col. 11, line 30).

Regarding claim 8, Frid et al as modified discloses a method of sending a registration request (figs. 3, 5, 8), wherein the session is associated with a device that is separate from the mobile node (col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 9, Frid et al as modified discloses a method of sending a registration request (figs. 3, 5, 8), wherein the session is associated with an application running on the mobile node (col. 11, line 32- col. 12, line 30; col. 12, lines 13-64).

Claims 10-11 contain similar limitations addressed in claim 1, and therefore are rejected under a similar rationale.

Regarding claim 12, Frid et al discloses a method of registering a session (figs. 3, 5, 8) with a Home Agent (320 of figs. 3, 5, 8), in a Foreign Agent (310 of fig. 5), the method comprising: receiving a registration request identifying a Home Agent (320 of figs. 3, 5 and 8) associated with the mobile node, the registration request further including a NAI (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66; col. 6, lines 33-66; col. 8, lines 24-66; col. 10, lines 12-60; col. 11, lines 8-41).

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However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the mobile node; and sending the registration request to the Home Agent.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 13, Frid et al as modified discloses method of registering a session (figs. 3, 5, 8) with a Home Agent (320 of figs. 3, 5, 8), in a Foreign Agent (310 of fig. 5), wherein the NAI is a user ID submitted during PPP authentication (col. 2, line 60- col. 3, line 15; col. 6, lines 33-66; col. 8, lines 24-60).

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Regarding claim 14, Frid et al as modified discloses method of registering a session (figs. 3, 5, 8) with a Home Agent (320 of figs. 3, 5, 8), in a Foreign Agent (310 of fig. 5), wherein the NAI is an identifier submitted for authentication of the mobile node (col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 15, Frid et al as modified discloses method of registering a session (figs. 3, 5, 8) with a Home Agent (320 of figs. 3, 5, 8), in a Foreign Agent (310 of fig. 5), wherein the NAI is an e-mail address or a user ID submitted in an application layer authentication (col. 6, lines 33-66; col. 8, lines 24-60; col. 10, lines 14-45).

Claim 16 contains similar limitations addressed in claim 12, and therefore is rejected under a similar rationale.

Regarding claim 17, Frid et al as modified discloses method of registering a session (figs. 3, 5, 8) with a Home Agent (320 of figs. 3, 5, 8), in a Foreign Agent (310 of fig. 5), wherein the session is associated with a device that is separate from the mobile node (col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 18, Frid et al as modified discloses method of registering a session (figs. 3, 5, 8) with a Home Agent (320 of figs. 3, 5, 8), in a Foreign Agent (310 of fig. 5), wherein the session is associated with an application running on the mobile node (col. 11, line 32- col. 12, line 30; col. 12, lines 13-64).

Regarding claim 19, Frid et al discloses a method of registering a session (figs. 3, 5, 8) associated with a mobile node in a Home Agent (320 of figs. 3, 5, 8), comprising: receiving a registration request, the registration request including a NAI identifying a mobile node (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66); authenticating the mobile node using the NAI; and

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composing a registration reply including the NAI identifying the mobile node (col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies the session associated with the NAI.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 20, Frid et al as modified discloses a method of registering a session (figs. 3, 5, 8) associated with a mobile node in a Home Agent (320 of figs. 3, 5, 8), wherein the

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NAI is a user ID submitted during PPP authentication (col. 2, line 60- col. 3, line 15; col. 6, lines 33-66; col. 8, lines 24-60).

Claims 21-22 contain similar limitations addressed in claim 19; and therefore are rejected under a similar rationale.

Regarding claim 23, Frid et al as modified discloses a method of registering a session (figs. 3, 5, 8) associated with a mobile node in a Home Agent (320 of figs. 3, 5, 8), wherein the session is associated with a device that is separate from the mobile node (col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 24, Frid et al as modified discloses a method of registering a session (figs. 3, 5, 8) associated with a mobile node in a Home Agent (320 of figs. 3, 5, 8), wherein the session is associated with an application running on the mobile node (col. 11, line 32- col. 12, line 30; col. 12, lines 13-64).

Regarding claims 25, 27-28, 31-34, Frid et al discloses a method of registering a session (figs. 3, 5, 8) associated with a mobile node, in a Home Agent (320 of figs. 3, 5, 8) comprising: receiving a registration request, the registration request including a NAI (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66; col. 6, lines 33-66); obtaining an IP address associated with the session (col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; composing a registration reply including the IP address, the NAI; and sending the registration reply

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 26, Frid et al as modified discloses a method of registering a session (figs. 3, 5, 8) associated with a mobile node, in a Home Agent (320 of figs, 3, 5, 8) wherein the NAI identifies a user ID submitted during PPP authentication (col. 2, line 60- col. 3, line 15; col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 29, Frid et al as modified discloses a method of registering a session (figs. 3, 5, 8) associated with a mobile node, in a Home Agent (320 of figs, 3, 5, 8) wherein the

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session is associated with a device that is separate from the mobile node (col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 30, Frid et al as modified discloses a method of registering a session (figs. 3, 5, 8) associated with a mobile node, in a Home Agent (320 of figs. 3, 5, 8) wherein the session is associated with an application running on the mobile node (col. 11, line 32- col. 12, line 30; col. 12, lines 13-64).

Regarding claims 35, 37, Frid et al discloses a method of processing a registration reply packet (figs. 3, 5, 8) received from a mobile node in a Foreign Agent (310 of figs. 3 and 5), comprising: receiving a registration reply including an IP address associated with the mobile node, a NAI (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66; col. 6, lines 33-66; col. 8, line 24- col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; updating a visitor table with a mapping of the NAI, and the IP address associated with the mobile node; and sending the registration reply to the mobile node

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct

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mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 36, Frid et al as modified discloses a method of processing a registration reply packet (figs. 3, 5, 8) received from a mobile node in a Foreign Agent (310 of figs. 3 and 5), wherein the NAI identifies a user ID submitted during PPP authentication (col. 2, line 60- col. 3, line 15; col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 38, Frid et al as modified discloses a method of processing a registration reply packet (figs. 3, 5, 8) received from a mobile node in a Foreign Agent (310 of figs. 3 and 5), wherein the session is associated with a device that is separate from the mobile node (col. 6, lines 33-66; col. 8, lines 24-60).

Regarding claim 39, Frid et al as modified discloses a method of processing a registration reply packet (figs. 3, 5, 8) received from a mobile node in a Foreign Agent (310 of figs. 3 and 5), wherein the session is associated with an application running on the mobile node (col. 11, line 32- col. 12, line 30; col. 12, lines 13-64).

Regarding claim 40, Frid et al discloses a computer-readable medium (figs. 3, 5, 8) for processing a registration request in a Foreign Agent (310 of figs. 3 and 5) comprising:

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Instructions for receiving a registration request identifying a Home Agent (320 of figs. 3, 5, 8) associated with the mobile node, the registration request further including a NAI associated with the mobile node (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66); instructions for providing a sub-NAI in the registration request; and instructions for sending the registration request to the Home Agent (320 of figs. 3, 5, 8) associated with the mobile node (col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI in the registration request, the sub-NAI uniquely identifying a session associated with the mobile node.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

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was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 41, Frid et al discloses a Foreign Agent (310 of figs. 3 and 5) adapted for registering a session with a Home Agent (320 of figs. 3 and 5), comprising: a processor; and a memory, the memory storing therein: instructions for receiving a registration request identifying a Home Agent (320 of figs. 3 and 5) associated with the mobile node (col. 2, line 52-col. 3, line 21; col. 4, lines 22-66); the registration request further including a NAI; and instructions for sending the registration request to the Home Agent (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home

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address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 42, Frid et al discloses a computer-readable medium (figs. 3, 5, 8) for registering a session associated with a mobile node in a Home Agent, (320 of figs. 3, 5, 8) comprising: instructions for receiving a registration request, the registration request including a NAI identifying a mobile node (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66); instructions for authenticating the mobile node using the NAI; and instructions for composing a registration reply including the NAI identifying the mobile node (col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of

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the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 43, Frid et al discloses a Home Agent (320 of figs. 3, 5 and 8) configured for registering a session associated with a mobile node, comprising: a processor; and a memory, the memory storing therein: instructions for receiving a registration request, the registration request including a NAI (col. 2, line 52- col. 3, line 21; col. 4, lines 22-66); instructions for obtaining an IP address associated with the session; instructions for composing a registration reply including the IP address, the NAI; and instructions for sending the registration reply (col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the feature of a sub-NAI that uniquely identifies the session associated with the NAI.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile

identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 44, Frid et al discloses a Foreign Agent adapted for processing a registration request, comprising: a processor; and a memory, at least one of the processor and the memory being adapted for: receiving a registration request identifying a Home Agent associated with the mobile node, the registration request further including a NAI associated with the mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the step of providing a sub-NAI in the registration request, the sub-NAI uniquely identifying a session associated with the mobile node; and sending the registration request to the Home Agent associated with the mobile node.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated

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with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 45, Frid et al discloses a Foreign Agent adapted for processing a registration request, comprising: means for receiving a registration request identifying a Home Agent associated with the mobile node, the registration request further including a NAI associated with the mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose a means for providing a sub-NAI in the registration request, the sub-NAI uniquely identifying a session associated with the mobile node; and means for sending the registration request to the Home Agent associated with the mobile node

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are

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connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 46, Frid et al discloses a computer-readable medium storing thereon computer-readable instructions for sending a registration request in a mobile node, comprising: instructions for composing a registration request identifying a Home Agent associated with the mobile node, the registration request further including a NAI associated with the mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the mobile node; and instructions for sending the registration request

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On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 47, Frid et al discloses a mobile node adapted for sending; a registration request, comprising: a processor; and a memory, at least one of the processor and the memory being adapted for: composing a registration request identifying a Home Agent associated with the mobile node, the registration request further including a NAI associated with the mobile node (col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the feature of sub-NAT that uniquely identifies a session associated with the mobile node; and sending the registration request.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 48, Frid et al discloses a mobile node adapted for sending a registration request, comprising: means for composing a registration request identifying a Home Agent associated with the mobile node, the registration request further including a NAT associated with the mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the mobile node; and means for sending the registration request.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 49, Frid et al discloses a computer-readable medium storing thereon computer-readable instructions for registering a session with a Home Agent in a Foreign Agent, comprising: instructions for receiving a registration request identifying a Home Agent associated with the mobile node, the registration request further including a NAI (320 of figs. 3, 5, 8; col.

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6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; and instructions for sending the registration request to the Home Agent.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 50, Frid et al discloses a Foreign Agent adapted for registering a session with a Home Agent, comprising: means for receiving a registration request identifying a Home

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Agent associated with the mobile node, the registration request further including a NAI (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; and means for sending the registration request to the Home Agent.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

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Regarding claim 51, Frid et al discloses a Home Agent adapted for registering a session associated with a mobile node, comprising: a processor; and a memory, at least one of the processor and the memory being adapted for: receiving a registration request, the registration request including a NAI identifying a mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; authenticating the mobile node using the NAT; and composing a registration reply including the NAI identifying the mobile node and the sub-NAI that uniquely identifies the session associated with the NAI.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

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was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 52, Frid et al discloses a Home Agent adapted for registering a session associated with a mobile node, comprising: means for receiving a registration request, the registration request including a NAI identifying a mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; means for authenticating the mobile node using the NAI; and means for composing a registration reply including the NAI identifying the mobile node and the sub-NAI that uniquely identifies the session associated with the NAI.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 53, Frid et al discloses a computer-readable medium storing thereon computer-readable instructions for registering a session associated with a mobile node in a Home Agent, comprising: instructions for receiving a registration request, the registration request including a NAI (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; instructions for obtaining an IP address associated with the session; instructions for composing a registration reply including the IP address, the NAI and the sub-NAI that uniquely identifies the session associated with the NAI; and instructions for sending the registration reply.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of

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the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 54, Frid et al discloses a Home Agent adapted for registering a session associated with a mobile node, comprising: means for receiving a registration request, the registration request including a NAI (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; means for obtaining an IP address associated with the session; means for composing a registration reply including the IP address, the NAI and the sub-NAI that uniquely identifies the session associated with the NAI; and means for sending the registration reply

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct

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mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 55, Frid et al discloses a computer-readable medium storing thereon computer-readable instructions for processing a registration reply packet received from a mobile node in a Foreign Agent, comprising: instructions for receiving a registration reply including an TP address associated with the mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; instructions for updating a visitor table with a mapping of the NAI, the sub-NAI, and the IP address associated with the mobile node; and instructions for sending the registration reply to the mobile node.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking

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function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 56, Frid et al discloses a Foreign Agent adapted for processing a registration reply packet received from a mobile node, comprising: a processor; and a memory, at least one of the processor and the memory being adapted for: receiving a registration reply including an address associated with the mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAI; updating a visitor table with a mapping of the NAT, the sub-NAI, and the IP address associated with the mobile node; and sending the registration reply to the mobile node.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify

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a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Regarding claim 57, Frid et al discloses a Foreign Agent adapted for processing a registration reply packet received from a mobile node, comprising: means for receiving a registration reply including an IP address associated with the mobile node (320 of figs. 3, 5, 8; col. 6, lines 33-66; col. 8, line 24-col. 9, line 21; col. 10, lines 14-45; col. 10, line 51- col. 11, line 30).

However, Frid et al does not specifically disclose the features of a sub-NAI that uniquely identifies a session associated with the NAT; means for updating a visitor table with a mapping of the NAT, the sub-NAI, and the IP address associated with the mobile node; and means for sending the registration reply to the mobile node.

On the other hand, Hiller et al, from the same field of endeavor, discloses a system and method that supports the correct routing of data packets to and from mobile nodes that are connected to the same visited data network. The mobile node identifier that can uniquely identify a mobile node is a network address identifier that is stored in a mobile identity table associated with the IWF and in a visitor list table associated with the foreign agent. The interworking function extracts the NAI and uses it to find the mobile node's link identifier in the mobile identity table. Once the link identifier is known, the IWF sends the data packets to the correct mobile node (col. 2, lines 39-56; col. 4, lines 20-67). Furthermore, Hiller et al shows in figure 2, a mobility identity table 18 that has entries with identical link identifiers, but the combination of the NAI and the mobile node home address is always unique. For instance, when a mobile node 4 has one NAI and two different home addresses, the combination of the mobile node 4's home address and the home agent 12's address is always unique (col. 5, line 1- col. 6, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Hiller to the system of Frid in order to share a mobile node identifier that can differentiate between mobile nodes with identical home addresses.

Response to Arguments

3. Applicant's arguments with respect to claims 1-57 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 703-306-3023. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MARCEAU MILORD

Marceau Milord
Examiner
Art Unit 2682